

CONCEPTUAL APPROACH FOR SELECTION OF THE PREFERRED PROGRAMMATIC ALTERNATIVE

*Comments
by end of Feb
on conceptual
approach*

INTRODUCTION

Selecting the preferred programmatic alternative will be difficult due to the enormous amount of information that must be considered. This paper proposes the use of a series of matrices to summarize the most important information needed to make that selection.

Ultimately, decision-makers would be provided with a matrix (decision matrix) similar to Attachment A containing information on how alternatives perform on key issues of interest. The decision matrix will be developed using several supporting matrices containing more detailed information. These supporting matrices will provide a well documented "paper trail" which explain how results were derived.

USING THE DECISION MATRIX

The decision matrix contains a summary of the most important information needed for selection of a preferred programmatic alternative. The matrix would be used to compare alternatives in one easily understood display. For each alternative (row), the decision matrix would indicate how it is judged to perform with respect to the most important information (column). The more completely filled circles would show where an alternative is expected to perform more favorably with respect to an issue.

These comparisons would allow decision makers to:

1. Eliminate alternatives that perform relatively poorly;
2. Emphasize alternatives that perform relatively well; and
3. Focus their selection on a common set of issues and comparisons.

For the example shown in Attachment A, the most important information is presented in two groups of columns. The first group of columns, titled "Consistency with Program Goals" would present information on the consistency of the alternatives with the program goals. The second group of columns refers to the program's solution principles. It would present information on the ability of the alternatives to meet the solution principles.

USING THE SUPPORTING MATRICES

Before the decision matrix can be developed, several supporting matrices containing more detailed information will need to be created (Figure 1). In general, results from a supporting matrix would be summarized. Summarized information from various supporting matrices would

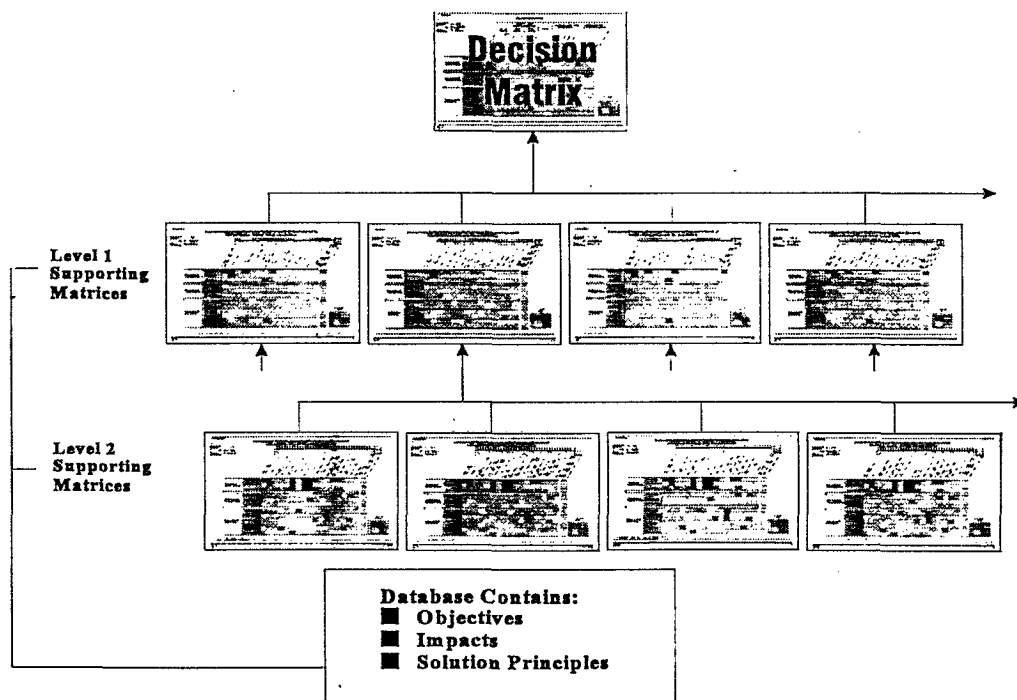
then be combined to form the matrix at the next higher level. This process would continue until the decision matrix is completed.

In addition, full documentation of an alternative's performance would be available in a database. This database may include technical and scientific data, meeting notes, modeling results, memos documenting rationale, etc.

The information presented in the supporting matrices would be predicated on the selection of information topics for the decision matrix. For Attachment B, the supporting matrices would be used to identify each alternative's:

- ability to meet specific program objectives. This information will be generated from the programmatic environmental impact analysis in the EIR/EIS.
- potential to result in significant adverse environmental impacts.
- consistency with the program's solution principles. This information will be generated by convening a team of informed resources interests to use their professional experience in judging the consistency of each alternative with the solution principles.

Figure 1. Decision Matrix and Supporting Matrices



EXAMPLE

Let's assume that the information needed for water quality (program's objectives) are displayed in the decision matrix (Attachment B). Indicators of performance of each alternative appear in the columns below each objective. To understand how the performance information in the decision matrix came about, turn to the supporting matrix (Attachment C). The supporting matrix identifies all the assessment variables (columns) of interest with respect to the drinking water quality objective, and how well each alternative (row) performs with respect to each assessment variable. An evaluation summary for the drinking water quality assessment variables is depicted in the last column. It is the information in this summary column which is then depicted in the drinking water column of the decision matrix.

NEXT STEPS

Additional work is needed to develop the framework of the decision and supporting matrices. CALFED staff will need to start working with agencies and stakeholders to define which information should be included to allow a selection of a preferred alternative. CALFED staff will also work with agencies and stakeholders to define which information should be included in the supporting matrices as backup to the final decision.



CALFED
BAY-DELTA
PROGRAM

Decision Matrix

A

EXAMPLES ONLY

		CONSISTENCY WITH PROGRAM GOALS															CONSISTENCY WITH SOLUTION PRINCIPLES				
		TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Alternative 1 Existing Delta	Alternative 1a	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 1b	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 1c	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Alternative 2 Through Delta	Alternative 2a	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 2b	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 2c	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Alternative 3 Dual Delta	Alternative 3a	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3b	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3c	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3d	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3e	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3f	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

TBD = To be determined

LEGEND

- High
- Medium
- Moderate

* Indications of performance are presented for demonstration purposes only.



CALFED
BAY-DELTA
PROGRAM

Decision Matrix

B

EXAMPLES ONLY

CALFED BAY-DELTA PROGRAM		IMPACT ANALYSIS																CONSISTENCY WITH SOLUTION PRINCIPLES				
		ABILITY TO MEET PROGRAM OBJECTIVES												ADVERSE IMPACTS								
		Ecosystem Restoration			Water Supply Reliability		Water Quality				System Integrity											
EXAMPLES ONLY		Tap	Tap	Tap	Tap	Tap	Tap	Drinking Water	Agricultural	Industrial	Recreational	Environmental	Tap	Tap	Tap	Tap	Tap	Tap	Tap	Tap	Tap	Tap
Alternative 1 Existing Delta	Alternative 1a	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 1b	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 1c	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Alternative 2 Through Delta	Alternative 2a	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 2b	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 2c	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Alternative 3 Dual Delta	Alternative 3a	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3b	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3c	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3d	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3e	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Alternative 3f	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

TBD = To Be Determined

LEG

●

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PROGRAM

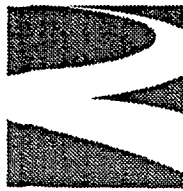
Alternatives Evaluation - Water Quality Drinking Water Quality

C

		Assessment Variables										Evaluation Summary
		Bromide	Total Organic Carbon	pH (Alkalinity as CaCO ₃)	Ammonia	Nutrients (Nitrate)	Chloride	Salinity (EC _s and TDS)	Pathogens	Turbidity	Drinking Water Quality	
Alternative 1 Existing Delta	Alternative 1a	○	○	○	●	○	○	○	○	○	○	○
	Alternative 1b	○	○	○	●	○	○	○	○	○	○	○
	Alternative 1c	○	○	○	●	○	○	○	○	○	○	○
Alternative 2 Through Delta	Alternative 2a	○	○	○	●	○	○	○	○	○	○	○
	Alternative 2b	○	○	○	●	○	○	○	○	○	○	○
	Alternative 2c	○	○	○	●	○	○	○	○	○	○	○
Alternative 3 Dual Delta	Alternative 3a	○	○	○	●	○	○	○	○	○	○	○
	Alternative 3b	○	○	○	●	○	○	○	○	○	○	○
	Alternative 3c	○	○	○	●	○	○	○	○	○	○	○
	Alternative 3d	○	○	○	●	○	○	○	○	○	○	○
	Alternative 3e	○	○	○	●	○	○	○	○	○	○	○
	Alternative 3f	○	○	○	●	○	○	○	○	○	○	○

ALTERNATIVE'S ABILITY
TO MEET TARGETS

LEGEND	
●	High
○	Medium
○	Moderate



CALFED
BAY-DELTA
PROGRAM

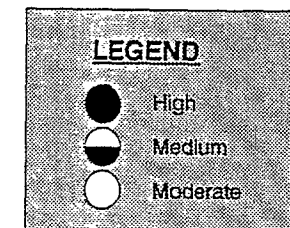
Decision Matrix

A

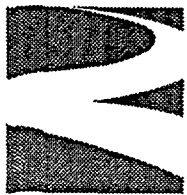
EXAMPLES ONLY

		CONSISTENCY WITH PROGRAM GOALS															CONSISTENCY WITH SOLUTION PRINCIPLES				
		TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Alternative 1 Existing Delta	Alternative 1a	●	◐	●	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●
	Alternative 1b	◐	●	●	◐	●	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●
	Alternative 1c	●	●	●	◐	●	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●
Alternative 2 Through Delta	Alternative 2a	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●
	Alternative 2b	●	◐	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●
	Alternative 2c	◐	●	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐
Alternative 3 Dual Delta	Alternative 3a	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐
	Alternative 3b	●	◐	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●
	Alternative 3c	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●
	Alternative 3d	●	●	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐
	Alternative 3e	●	◐	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●
	Alternative 3f	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●	◐	●

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Decision Matrix

B

EXAMPLES ONLY

		IMPACT ANALYSIS																					CONSISTENCY WITH SOLUTION PRINCIPLES			
		ABILITY TO MEET PROGRAM OBJECTIVES															ADVERSE IMPACTS									
		Ecosystem Restoration			Water Supply Reliability			Water Quality					System Integrity													
		TBD	TBD	TBD	TBD	TBD	TBD	Drinking Water	Agricultural	Industrial	Recreational	Environmental	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Alternative 1 Existing Delta	Alternative 1a	●	◐	●	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
	Alternative 1b	◐	●	●	◐	●	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
	Alternative 1c	●	●	●	◐	●	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
Alternative 2 Through Delta	Alternative 2a	◐	●	◐	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
	Alternative 2b	●	◐	◐	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
	Alternative 2c	◐	●	●	◐	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
Alternative 3 Dual Delta	Alternative 3a	●	◐	●	◐	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
	Alternative 3b	●	◐	◐	◐	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
	Alternative 3c	◐	●	◐	◐	◐	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
	Alternative 3d	●	●	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
	Alternative 3e	●	◐	◐	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	
	Alternative 3f	◐	●	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	

TBD = To be Determined

LEGEND

- High
- ◐ Medium
- Low

TBD = To be determined

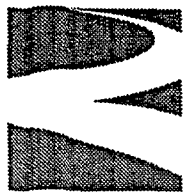
LEGEND

● High

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○ Moderate

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CALFED
BAY-DELTA
PROGRAM

Alternatives Evaluation - Water Quality Drinking Water Quality

C

		Assessment Variables									Evaluation Summary
		Bromide	Total Organic Carbon	pH (alkalinity as CaCO ₃)	Ammonia	Nutrients (nitrate)	Chloride	Salinity (EC _s and TDS)	Pathogens	Turbidity	
Alternative 1 Existing Delta	Alternative 1a	○	○	◐	●	◐	◐	○	○	○	◐
	Alternative 1b	○	◐	◐	●	◐	○	◐	○	○	◐
	Alternative 1c	○	○	◐	●	●	◐	◐	○	◐	◐
Alternative 2 Through Delta	Alternative 2a	◐	○	●	●	●	●	◐	●	◐	●
	Alternative 2b	◐	◐	◐	●	●	●	◐	●	◐	◐
	Alternative 2c	●	◐	●	◐	●	●	◐	●	●	●
Alternative 3 Dual Delta	Alternative 3a	●	●	●	●	●	●	●	●	●	●
	Alternative 3b	●	●	●	●	●	●	◐	●	●	●
	Alternative 3c	●	◐	●	●	◐	●	●	●	●	●
	Alternative 3d	●	●	●	●	●	●	●	●	●	●
	Alternative 3e	●	◐	●	●	●	●	●	●	◐	●
	Alternative 3f	●	●	●	●	●	●	●	●	●	●

ALTERNATIVE'S ABILITY
TO MEET TARGETS

LEGEND

● High

◐ Medium

○ Moderate

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